4037 4037a.

4037-4037a

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

11—5613

State: Alaska

DESCRIPTIVE REPORT.

Hyd. Sheet No. 4037 and 4037a

LOCALITY:

North End of
Wrangell Narrows,
Vicinity of Petersburg

1918

CHIEF OF PARTY:

John W. Maupin

Hydrographic Sheet No. 4037.
Wrangell Narrows: Petersburg to Frederick Sound.
Alaska.

This survey was performed in accordance with letter of instructions dated July 3, 1918 for the purpose of developing certain areas outlined on copy of Chart which formed a part of letter of instructions. (Descriptive Report)

The ground has been thoroughly covered with closely run lines and soundings and in addition the harbor swept.

In comparing this sheet with sheet No. 3208, work of 1910 it appears that but little change has taken place in the bottom during the 8 years between the two surveys, and that no additional critical conditions developed which does not show on Sheet No. 3208.

In the last paragraph "Descriptive Report" attention is called to a 12 ft sounding which developed 180 meters N. 60 W. (True) from Signal "Boat" where a 14 ft sounding is previously shown. This report has been carefully looked in to but the 12 ft sounding, as noted is not found. The records have been carefully gone over and all 12 ft soundings and less located and checked. It may be possible that when Sheet 4037 is completed this condition may be developed

John D. Tossey
7/5/19.

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 41-EMK

HYDROGRAPHY ETC., (HT)

CHARTS

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

May 27, 1919.

Division of Hydrography and Topography: HCR

Division of Charts:

Tidal reductions have been approved in 3 volumes of Sounding and Harbor Sweep records for

HYDROGRAPHIC SHEETS 4037, 4037a

Wrangell Narrows, S. E. Alaska.
John W. Maupin in 1918.

Plane of reference is 3 ft. below mean lower low water, reading

0.0 ft. on staff at Petersburg.

R. H. Rice

Chief, Section of Tides
and Currents.

DESCRIPTIVE REPORT, to accompany

HYDROGRAPHIC AND HARBOR-SWEEP SHEETS NOS 4037 & 4037.

NORTH END OF WRANGELL NARROWS, VICINITY OF PETERSBURG

SOUTHEASTERN ALASKA.

U. S. S. COSMOS-O-August 1918

John W. Maupin, Chief of Party.

Descriptive report, to accompany hydrographic and harbor-sweep sheets Nos. 4037 & 4037a North end of Wrangell Narrows, vicinity of Petersburg southeastern Alaska.

The instructions, dated July 3, 1918, covering the work on these two sheets (hydrographic and harbor-sweep) called for the development of an area outlined inred ink on a copy of chart #8170, using the hand lead and harbor -sweep to locate possible boulders. The area extends from a point opposite Petersburg to the north end of Wrangell Narrows where same empties into Frederick Sound. As the area embodied by these two sheets is small in extent and as they cover the same ground, this report is made to include both the hydrographic and harbor sweep sheets.

In view of the comparatively small size of boulders and the necessity of taking very close soundings, also the small width of the harbor sweep, a scale of 1-2500 was used for both sheets.

Most of the old stations, were recovered, and by supplementing these by two new stations which were located by sextant cuts, sufficient control for the work was obtained.

The soundings were taken very close together, and, in addition to the depths shown on the sheet, many hours were spent in feeling over the bottom for possible boulders, The very large scale on which the work was done, and the strong currents running in whirl pools and eddies which would set the launch in all directions at times, made an accurate development extremely difficult.

The harbor sweep work was attendant with so many difficulties, at times it seemed an impossibility to cover the ground by this method. In order to withstand the force pf the current, it was necessary to use two

inch pipe on the sweep which made it very heavy and it could only be operated with great difficulty by the few men who could work in the contracted space on the stern of the launch. With a maximum current of five knots, the sweep extending thirty feet below the surface of the water, the difficulties in manoeuvreing the launch to accurately cover an area with a sweep pipe only six meters wide were extreme. Each day the party continued work as long as the current would permit, when the pipes would break and make it necessary to lay off for repairs. During the work the sweep broke twelve times and much time was consumed in repair work. Buoys were planted and located, which helped to keep the launch within the area which was being developed, and by continued effort the ground was covered as closely as possible. It is certain that the several small spaces between the recorded sweep lines were also covered in manoeuvering the launch back and forth during the process of starting a line. All the two inch pipe to be had in town was purchased and consumed and when the current finally carried the sweep onto a charted reef breaking it to pieces and losing half of it, the season was closed. From this seasons experience with the harbor sweep, I would only recommend it for developing very small areas where there is no current.

From the records it will be seen that the results obtained agree very closely with the original survey performed in 1910. At a point 180 meters N. 60 W. (true) from signal boat, a depth of twelve feet was obtained where 14 feet was previously shown. This is considered one of the crucial spots of the work, and, from all reports (including eye witnesses) it is where several vessels have grounded. After the completion of this survey the Superintendent of Lighthouses at Ketchikan, Alaska stated his intentions

of placing a buoy on this spot and a blue print was furnished him by this party for use in locating same.

Respectfully submitted,

John W. Mayo.